



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,302	09/08/2003	Haim H. Bau	P-27,076-A USA	9721

23307 7590 03/02/2007
SYNNESTVEDT & LECHNER, LLP
2600 ARAMARK TOWER
1101 MARKET STREET
PHILADELPHIA, PA 191072950

EXAMINER

KOCZO JR, MICHAEL

ART UNIT	PAPER NUMBER
----------	--------------

3746

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/657,302

Applicant(s)

BAU, HAIM H.

Examiner

Michael Koczo, Jr.

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 7-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10-27-2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of the group I invention and the species of figure 4 in the reply filed on December 18, 2006 is acknowledged. The traversal is on the ground(s) that examining both the group I and group VI inventions would not impose any burden on the examiner. This is not found persuasive because, contrary to what applicant suggests, the examination burden is not limited exclusively to a prior art search but also includes the effort required to apply the art by making and discussing all appropriate grounds of rejection. Multiple inventions, such as those in the present application, normally require additional reference material and further discussion for each additional invention examined. Concurrent examination of multiple inventions would thus typically involve a significant burden even if all searches were coextensive.

Furthermore, it is noted that the group VI invention does not require an activation sequence, and the group I invention does not require placement of the electrodes within the conduit such that the magnetic field generates chaotic advection of the fluid. This is further evidence of the distinctness of these inventions.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

The drawings are objected to because of the following reasons:

Solid black shading areas are not permitted (37 CFR 1.84(m)).

Art Unit: 3746

Each drawing figure must have reference characters applied thereto. Each reference character must have a lead line.

Figures must be numbered separately (see figure 10, for example).

The drawings are objected to for not complying with 37 C.F.R. 1.84(i) which requires that the plane upon which a sectional view is taken should be indicated on the general view by a broken line, the ends of which should be designated by numerals corresponding to the figure number of the sectional view and have arrows applied to indicate the direction in which the view is taken.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the electrode controller must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

Art Unit: 3746

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites an “algorithm for determining the activation sequence”. An algorithm is not structure and therefore it is not clear what is the intended limiting effect of this recitation.

Regarding claim 3, it is not understood what part of the network is made by the process of claim 3.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language:

Claims 1, 3, 4 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al (US 6,733,172). Lee et al disclose a controlled MHD driven fluidic network having a plurality

Art Unit: 3746

of connected and individually controlled conduits 18a, 18b, 19 and 19b for the transmission of a conductive fluid 11, 12. Each conduit has a pair of opposing walls and at least one pair of electrodes 14a, 14b ... disposed along the opposing walls, and an electrode controller 5 which implements an activation sequence of potentials across the electrodes to move the fluid 11, 12 (see figure 1 and col. 5, para. 2). Claim 3 is being treated as a product-by-process claim. The structure as claimed would appear to be similar to the structure of Lee et al. That is, the process of forming the network does not impart any distinctive structural characteristics to the claimed network.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2, as understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. Lee et al disclose the invention substantially as claimed. However, Lee et al do not disclose an algorithm for determining the activation sequence. Official Notice is taken of the fact that it is well known in the control art to use microprocessors which process algorithms for effecting control.

Claim 3, as understood, is also rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al in view of the publication to Zhong et al (Magneto-Hydrodynamic (MHD) Pump Fabricated with Ceramic Tapes). Lee et al disclose the invention substantially as claimed.

Art Unit: 3746

However, Lee et al do not disclose a plurality of ceramic tapes co-fired into a unitary structure. Zhong et al disclose forming MHD substrates by co-firing ceramic tapes into a unitary structure. This has the advantage of producing a highly dielectric substrate. In view of this teaching, it would have been obvious to form the substrate of Lee et al by co-firing ceramic tapes into a unitary structure.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Claims 5 and 7 to 21 stand withdrawn from further consideration as being drawn to non-elected inventions and species.

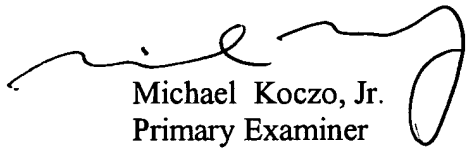
Any inquiry relating to patent applications in general should be directed to the Patent Assistance Center at 1-800-786-9199.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kocz, Jr. whose telephone number is 571-272-4830. The examiner can normally be reached on M-Th; 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached at 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Koczo, Jr.
Primary Examiner
Art Unit 3746